Applicant: Paul T. Bender Attorney's Docket No.: 02103-381001 / AABOSS16

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Amendments to the claims (this listing replaces all prior versions):

1. (previously presented) A system comprising:

in a vehicle suspension having an actuator, a clamp circuit including switch circuitry powered by energy from movement of the actuator to generate a passive damping characteristic of the actuator.

- 2. (previously presented) The system of claim 1 in which the actuator has a coil assembly, the switch circuitry including a switch for electrically connecting the coil assembly.
- 3. (original) The system of claim 2 in which the coil assembly is a multiple-phase coil assembly, the switch electrically connecting one or more coil ends to change the passive damping characteristic of the actuator.
- (previously presented) The system of claim 2 in which the switch circuitry comprises a solid-state device.
- (previously presented) The system of claim 4 in which the clamp circuit includes a rectifier and the switch circuitry comprises a single unidirectional switch.
- 6. (previously presented) The system of claim 1 in which the actuator includes an armature and a stator, the movement of the actuator generating a back electromotive force (EMF) as a result of the armature moving relative to the stator within the actuator, the back EMF powering the switch circuitry.
- 7. (original) The system of claim 6 in which the back EMF is boosted by a supplemental circuit.

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 (original) The system of claim 7 in which the supplemental circuit comprises a bipolar Royer oscillator capable of operating at an input voltage of approximately 0.5 volts.

- (original) The system of claim 1 in which the clamp circuit is enabled during vehicle startup and shutdown.
- (original) The system of claim 1 in which the clamp circuit is enabled when a failure is detected.
- 11. (original) The system of claim 1 in which the clamp circuit is pulsed to change the passive damping characteristic of the actuator.
- (previously presented) A system comprising:

in a vehicle suspension system having an actuator, an active clamp function provided by power-switching devices for the actuator; and

a clamp circuit including switch circuitry powered by energy from a motion of the actuator.

- 13. (previously presented) The system of claim 12 in which the actuator has a multiple-phase coil assembly, the switch circuitry including a switch for electrically connecting one or more coil ends to change a passive damping characteristic of the actuator.
- 14. (previously presented) The system of claim 13 in which the switch circuitry comprises a solid-state device.
- 15. (previously presented) The system of claim 14 in which the clamp circuit includes a rectifier and the switch circuitry comprises a single unidirectional switch.

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16. (original) The system of claim 12 in which the clamp circuit is enabled during a vehicle startup and shutdown.

- 17. (original) The system of claim 12 in which the clamp circuit is enabled when a failure is detected.
- 18. (original) The system of claim 12 in which the clamp circuit is pulsed to change the passive damping characteristic of the actuator.
- 19. (previously presented) A vehicle suspension system comprising:

an electronic controller adapted to produce an actuator control signal; and

an actuator adapted to receive electrical power from an external power source and to produce a controlled force in response to the actuator control signal produced by the electronic controller, the actuator comprising a clamp circuit including switch circuitry powered by energy from power generated within the actuator by movement of the actuator itself to generate a passive damping characteristic of the actuator.

- 20. (previously presented) The system of claim 19 in which the actuator has a coil assembly, the switch circuitry including a switch for electrically connecting the coil assembly.
- 21. (original) The system of claim 20 in which the coil assembly is a multiple-phase coil assembly, the switch electrically connecting one or more coil ends to change the passive damping characteristic of the actuator.
- 22. (original) The system of claim 20 in which a movement of the actuator generates an electromotive force (EMF) to operate the switch adapted to receive the electromotive force to maintain electrical connection between windings.

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 (previously presented) The system of claim 20 in which the switch circuitry comprises a solid-state device.

- 24. (previously presented) The system of claim 23 in which the clamp circuit includes a rectifier and the switch circuitry comprises a single unidirectional switch.
- 25. (original) The system of claim 19 in which the clamp circuit is pulsed to change the passive damping characteristic of the actuator.
- 26. (previously presented) A method comprising:

in a vehicle suspension having an actuator, generating a passive damping characteristic of the actuator through a clamp circuit including switch circuitry powered by energy from movement of the actuator.

- 27. (previously presented) The method of claim 26 in which the actuator has a coil assembly, the switch circuitry including a switch for electrically connecting the coil assembly.
- 28. (original) The method of claim 27 in which the coil assembly is a multiple-phase coil assembly, the switch electrically connecting one or more coil ends to change the passive damping characteristic of the actuator.
- 29. (previously presented) The method of claim 27 in which the switch circuitry comprises a solid-state device.
- 30. (previously presented) The method of claim 29 in which the clamp circuit includes a rectifier and the switch circuitry comprises a single unidirectional switch.
- 31. (previously presented) The method of claim 26 in which the actuator includes an armature and a stator, the movement of the actuator generating a back electromotive force

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(EMF) as a result of the armature moving relative to the stator within the actuator, which powers the switch circuitry.

- 32. (original) The method of claim 31 in which the back EMF is boosted by a supplemental circuit.
- 33. (original) The method of claim 32 in which the supplemental circuit includes a bipolar Royer oscillator capable of operating at an input voltage approximately 0.5 volts.
- 34. (original) The method of claim 26 in which the clamp circuit is enabled during a vehicle startup and shutdown.
- 35. (original) The method of claim 26 in which the clamp circuit is enabled when a failure is detected.
- 36. (original) The method of claim 26 in which the actuator is powered by a power electronics module that further provides an active clamp to the actuator.
- 37. (original) The method of claim 36 in which the active clamp and the clamp circuit are simultaneously enabled when a failure is detected or during a vehicle shutdown.
- 38. (original) The method of claim 36 in which the active clamp is enabled and the clamp circuit is disabled sequentially during a vehicle startup.
- 39. (original) The method of claim 36 in which the clamp circuit and the active clamp are sequentially disabled when switching back from failure to normal operation mode.
- 40. (original) The method of claim 36 in which a clamp circuit status signal is fed to the power electronics module to inhibit the power electronics module from switching when the clamp circuit is enabled.

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41. (original) The method of claim 26 in which the clamp circuit is pulsed to change the passive damping characteristic of the actuator.

42-43. (cancelled

- 44. (currently amended) The system of claim [[43]] 36 in which the <u>power electronics</u> module power source is <u>powered by</u> a battery.
- 45. (currently amended) The system of claim [[43]] 36 in which the power electronics module power source is powered by a large valued capacitor.
- 46-58. (canceled).